Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of Amendment to Part 27 of the Commission's Rules To Revise Rules for Services in the 2.3 Ghz Band and To Include Licensing of Services In the 47 GHz Band	)	WT Docket No. 98-136

To: The Commission

COMMENTS OF SKY STATION INTERNATIONAL, INC.

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SUMMARY

Four years ago the Commission set spectrum policy in a new direction by initiating the *Millimeter Wave Proceeding* to encourage commercial development and use of this under-utilized spectrum. This portion of the spectrum held promise as a means of delivering wireless broadband services which could compete with co-axial cable and fiber optic technology. The Commission is now ready to adopt service rules that will enable companies such as Sky Station, with its proposed stratospheric platforms, and other successful bidders to bring to market an exciting range of low-cost, spectrum-efficient services. Sky Station urges the Commission to move promptly to adopt the rules set forth in the *Notice*, with only modest changes, and to establish a schedule for the auction of the 47 GHz band in the first quarter of 1999.

Stratospheric systems, which the Commission found to be the likely dominant use of the 47 GHz band, can provide consumers with a low-cost alternative for their broadband needs. Stratospheric systems can be rapidly deployed to provide service to an entire metropolitan area with the launch of a single lighter-than-air, FAA-certified platform. Deployment of a service using the 47 GHz band, such as a stratospheric system, will advance two important Commission goals -- universal service and local competition -- by bringing affordable and scalable broadband service to citizens in all parts of the nation and the world. Stratospheric systems, as originally proposed by Sky Station, have won international support and recognition at WRC-97 due to the FCC's leadership and because of widespread recognition of the unique ability of stratospheric platforms to provide universal broadband service to a targeted area.

To achieve the goal of encouraging use of millimeter wave services and deployment of stratospheric services, the Commission should fine tune and promptly adopt service rules as outlined in the Notice:

- Service areas should be based on the 12 REAGs.
- Co-channel stations within 200 km of a service boundary should be subject to interference coordination; other interference rules are unnecessary.
- The Commission's other proposals are sound, including reliance on the FAA to resolve air safety issues and modest government sharing arrangements.

The Commission should (i) promptly adopt service rules, and (ii) set an auction date for early 1999. Then the vision of millimeter wave services can be realized.

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To: The Commission

COMMENTS OF SKY STATION INTERNATIONAL, INC.

Sky Station International, Inc. ("Sky Station") hereby submits these comments in support of the Commission's well-considered Notice of Proposed Rule Making ("Notice") and urges the prompt adoption of 47 GHz[1/] service rules and the commencement of a 47 GHz auction in the first quarter of 1999.[2/] These actions will enable the implementation of revolutionary stratospheric technologies that will benefit the public by providing vital competition in the emerging broadband marketplace. The Notice sets forth a well-crafted, flexible regulatory approach that accommodates stratospheric services and other permissible uses in the 47 GHz band. *First*, the Commission should expedite the launch of these important new services that will bring competition and innovation to various communications sectors. *Second*, the Commission

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1/ The term "47 GHz band" refers to the 47.2-48.2 GHz band.

2/ Without waiting to act on the service rule proposals in this proceeding, the Commission should announce now its intention to conduct the auction in the first quarter of 1999. This announcement would enable interested persons to begin organizing, financing and making arrangements for participation in the auction.

should generally hue to its regulatory proposals: (a) service areas based on the twelve Regional Economic Area Groupings ("REAGs"), along with other flexible regulatory policies; (b) interference coordination among co-channel stations located within 200 km of a service area boundary; and (c) various other sensible technical requirements for all 47 GHz licensees.

I. THE PUBLIC WILL BENEFIT FROM RAPID IMPLEMENTATION OF THE COMMISSION'S 1994 PLAN TO PROMOTE BROADBAND COMPETITION USING MILLIMETER WAVE FREQUENCIES.

A. Further Delay In The Adoption Of 47 GHz Service Rules And A 47 GHz Auction Date Will Harm The Public Interest.

The implementation of 47 GHz service rules and the commencement of a 47 GHz auction in the first quarter of 1999 mark the final critical stages of a protracted regulatory campaign to bring competitive new broadband services to the public using otherwise under-utilized spectrum. Four years ago, the Commission initiated the Millimeter Wave Proceeding in order to encourage "commercial development and use" of the 47 GHz band and other under-developed millimeter wave spectrum.[3/] This 1994 Commission decision reflected a vision to employ unused millimeter spectrum in a market-driven fashion to support broadband telecommunications applications, including educational, medical and other high data rate services, to compete with co-axial and fiber

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[3/] See Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of the Radio Frequencies Above 40 Ghz for new Radio Applications, Notice of Proposed Rulemaking, adopted October 20, 1994, released November 8, 1994, 9 FCC Rcd. 7078, 7078 (1994) [hereinafter the "Millimeter Wave Notice" and, generally, the "Millimeter Wave Proceeding"].

optic cable.[4] The Commission intended the Millimeter Wave Proceeding to generate intermodal competition, lower priced services, development of millimeter wave technologies, and economic and job growth. The Commission also intended the proceeding to promote U.S. technological leadership.[5]

The Commission has made great progress towards achieving its objectives set forth in the Millimeter Wave Proceeding. Several parties filed comments in 1995 proposing various commercial applications for the millimeter wave frequencies in response to the Millimeter Wave Notice.[6] On March 20, 1996, Sky Station submitted a proposal seeking to authorize the use of revolutionary new global stratospheric telecommunications systems in the 47 GHz band, thereby laying the groundwork for the most important breakthrough in telecommunications infrastructure in forty years.

Recognizing the tremendous potential of Sky Station's innovative 47 GHz proposal, the Commission promptly placed it on public notice on April 1, 1996. Ninety percent of the commenting parties overwhelmingly supported Sky Station's stratospheric proposal.[7] Echoing the nearly unanimous support for stratospheric services, the Commission decided on May 2, 1997, to allocate the 47 GHz band for use by all licensed

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[4] Id. In 1994, the Commission envisioned that short-range radio systems would be developed to offer these high capacity services. Since that time, stratospheric systems and possibly other new technologies have expanded the options.

[5] Id. at 7080-81

[6] See e.g., Comments of the Telecommunications Industry Association; Comments of AT&T; Comments of Hewlett-Packard Co.; and Comments of General Motors Corp., filed in docket 94-124.

[7] See FCC Public Notice, Report No. 2127, dated April 1, 1996; Reply Comments of Sky Station International, Inc., ET Docket No. 94-124, RM-8784, dated May 16, 1996.

services permitted in the Table of Allocations, with the likely dominant use being fixed stratospheric services (the "Allocation Decision").[8]

Although the text of the Allocation Decision was not released for almost another three months, the Commission stated its intention in July 1997 "to complete the licensing of the 47 GHz band as quickly as possible . . . to promote the commercial availability of millimeter wave technologies."[9] Yet almost another full year elapsed before the Commission adopted the instant 47 GHz service rule proposal, and an auction date has yet to be established.

B. The Public Interest Requires That The Commission Establish Service Rules And Set An Auction Date.

It is imperative that the Commission move forward and promptly adopt 47 GHz service rules and commence a 47 GHz auction in the first quarter of 1999. Only with these actions will the public finally be able to benefit from a breakthrough that will transform telecommunications services. Stratospheric telecommunications systems will provide global low-cost broadband telecommunications services in the 47 GHz band. At the heart of the stratospheric system is a lighter-than-air geostationary airship that is positioned in the stratosphere, the largest portion of the earth-space continuum unused for telecommunications. The stratosphere location offers superior characteristics for delivery of telecommunications but remains completely unutilized. Each airship, equipped with a

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[8] See Amendment of Parts 2, 15, and 97 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 Ghz for New Radio Applications, Second Report and Order,12 FCC 10571 (1997) ["Second Report and Order"].

[9] Id. at ¶ 4.

47 GHz telecommunications payload, has the capacity to serve up to one million broadband subscribers in a very large geographic area.[10/]

The 47 GHz stratospheric services will benefit the public by helping achieve some of the most challenging and important goals of the Telecommunications Act of 1996.[11/] For example, stratospheric services will inject much needed competition into the broadband telecommunications marketplace. At present, broadband telecommunications services are provided almost exclusively by local exchange carriers and incumbent cable operators. As the demand for broadband services continues to grow, these incumbents are increasingly likely to charge monopoly or duopoly rates that exceed the budget of many consumers. Stratospheric systems, however, can provide consumers with a low-cost alternative for their broadband needs that may be rapidly deployed to provide service to an entire metropolitan area with a single lighter-than-air platform. As with the experience in the wireless industry when PCS entered a marketplace already occupied by only two cellular service providers per market, stratospheric competition

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[10/] The airship design is based on existing and proven airship technologies. Each airship will be equipped with on-board solar and fuel cells to provide the necessary power. By using advanced proprietary technology, the airships can remain in geostationary position at 70,000 feet (21 km), well above commercial airspace and weather.

[11/] Entrepreneurs like Sky Station providing new services, especially capital intensive services, can be particularly injured by regulatory delay and uncertainty. This entrenches their established competitors -- a fact not unknown to those established competitors who, as in this case, can game the Commission's procedures to buy time against new entrants and even cripple their chances for success.

should dramatically expand the use of broadband services and may well cause incumbent broadband providers to lower their monopoly or duopoly rates.[12/]

In addition to providing competition, stratospheric systems will advance universal service by helping ensure that all citizens -- rich and poor, urban and rural -- have access to low-cost broadband services. Similarly, by providing broadband service at affordable prices, stratospheric systems, more than any other broadband network, will be able to make capacity available for schools, libraries, hospitals and other non-profit institutions, and close the unfair and persistent gap between information "haves" and "have nots".

Finally, stratospheric services will promote U.S. technological leadership world-wide. Sky Station, an American company, has pioneered stratospheric telecommunications technologies, which have gained significant support in the international community. French, German, Japanese and Italian companies, among others, have announced their support for the Sky Station technology. The 1997 World Radio Conference ("WRC-97"), in response to leadership provided by the United States government, and the Commission in particular, designated a portion of the 47 GHz band for use by High Altitude Platform Stations ("HAPS") worldwide, thereby facilitating the development of global stratospheric networks.

12/ Indeed, once the cellular industry faced competition from PCS, it significantly reduced its duopoly rates. See, "Bell Atlantic Takes 'Aggressive' Step in Cutting Cellular Rates 15%," Communications Daily, March 3, 1998; see also, "Competitive Rates in Wireless Telecom," Study compiled by Paul Kagan Associates, Inc., Nov. 1997 (indicating that rates have dropped by more than 33% in certain U.S. markets, reflecting a heightened state of competition between cellular and PCS).

Since WRC-97, other countries have embraced this technology as a low cost, easily deployed, scalable and versatile means to meet the growing demand, in both developed and developing countries, for broadband services. The Commission now holds the historic responsibility to complete its revolutionary work by implementing a regulatory scheme -- through the adoption of appropriate 47 GHz service rules and the commencement of a 47 GHz auction in early 1999 -- to make stratospheric services and other 47 GHz applications available in the United States.

II. THE COMMISSION SHOULD IMPLEMENT ITS PROPOSAL TO AMEND PART 27 OF ITS RULES WITH CERTAIN CLARIFICATIONS.

Sky Station generally supports the Commission's well-crafted proposal to license the 47 GHz band using the Part 1 competitive bidding process and to regulate 47 GHz licensees pursuant to Part 27, subject to certain modifications described herein.[13] Notice at ¶¶ 51-56. This flexible regulatory approach will allow the development of stratospheric services as well as other permissible 47 GHz services, provided that the Commission implements three important principles. *First*, the Commission should adopt service areas based on the twelve Regional Economic Area Groupings ("REAGs"), along with other flexible regulatory policies. *Second*, the Commission should require interference coordination among co-channel stations located within 200 km of a service area boundary. *Third*, the Commission should adopt other sensible technical requirements for all 47 GHz licensees.

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[13] The modified Part 27 regulations should be subject to any applicable requirements in Part 20, Part 25 or any other applicable section of the Commission's rules. Notice at ¶ 56.

A. The 47 GHz Service Rules Should Include REAGs Service Areas And Other Flexible Licensing Policies.

Sky Station supports the Commission's proposal to license the 47 GHz band based upon the twelve Regional Economic Area Groupings ("REAGs") and to adopt other flexible licensing policies, including (i) liberal spectrum disaggregation and partitioning rules, (ii) a blanket licensing policy and substantial service requirement, (iii) minimum ownership restrictions, and (iv) flexible regulatory status and operating requirements. As set forth below, the adoption of rules consistent with these policies will provide 47 GHz licensees with the necessary flexibility to implement a wide array of new telecommunications applications.

1. REAGs are essential for the swift implementation of 47 GHz services.

The adoption of service areas based upon the twelve REAGs is necessary to optimize the public interest benefits of 47 GHz stratospheric services.[14/] Notice at ¶ 85. As explained above, each stratospheric airship will advance universal service by providing low-cost broadband telecommunications services in a large geographic area to up to one million subscribers. Smaller service areas would cripple this broad geographic coverage advantage because a stratospheric deployment provides service to a large area and requires a large separation distance to avoid co-channel interference with other systems.[15/] In contrast to terrestrial fixed service systems, the geometrical configuration

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[14/] Sky Station agrees that the Commission should not rely on service area definitions that require a copyright license. Notice at ¶ 83.

[15/] This is of particular concern since stratospheric transmitters generally should be

(continued...)

of the stratospheric system is essentially fixed by the operating altitude of the airship. It is difficult to reduce the transmitter power for interference mitigation without compromising the link quality. The only practical method to reduce interference is to turn off the interfering beams altogether. Consequently, smaller service areas would require stratospheric licensees to deploy multiple stratospheric platforms to serve one coverage area. This, in turn, may deprive many citizens, particularly in rural areas, of the benefits of stratospheric service and competition -- persons whom the Commission hopes to reach with competitive broadband services. Therefore, smaller service areas would severely over-burden the stratospheric licensees with coordination requirements that would cancel the inherent wide area coverage benefits of stratospheric deployment.

Large but manageable service areas such as REAGs should result in faster service deployment, which in turn will promote local telephone competition as well as diversity in technology options. Notice at ¶ 84. REAGs have a benefit over a nationwide service area: the regions do not prejudice niche service providers, assuming the Commission adopts the liberal spectrum disaggregation and partitioning policies that it has proposed and that Sky Station endorses. The Commission has experience from licensing in the PCS, SMR, and other services that dividing the country into a manageable number of regions promotes innovation, expands opportunity, and benefits the public interest. And if a party wants to assemble a national footprint, that can be easily accomplished.

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[15](...continued)
located at least some distance away from the service area boundaries to minimize the potential interference. See Section II(B)(1)(a) infra.

2. Spectrum disaggregation and partitioning are good complements to the REAGs and channelization plan.

The Commission should adopt its proposed spectrum disaggregation and partitioning policies to foster the most efficient licensing of 47 GHz spectrum.[16/] Notice at ¶¶ 95-100. These policies will enable a licensee desiring less bandwidth or coverage area to assign a portion of its interest to another qualified entity. Additionally, it will enhance participation in the 47 GHz band by making spectrum available to entities which did not acquire a license in the 47 GHz auction. Id. The Commission has adopted this policy in other contexts to good effect, and it should follow that policy here.

3. A blanket licensing policy and substantial service requirement are appropriate for the 47 GHz service.

To streamline the 47 GHz licensing process, the Commission should issue a blanket authorization for each service area and not require separate applications to be filed for individual transmitters. Notice at Appendix B, § 27.11(b)(3). This approach conserves Commission resources and minimizes the regulatory burden while allowing for efficient regulation. The license should be issued for a ten-year term with a requirement that the licensee provide "substantial service" by the end of this period. Id. at ¶¶ 88-94. This build-out requirement and license term is consistent with rules for like services and adequately protects the public.[17/] Consistent with other FCC rules, the licensee should

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[16/] Sky Station supports the Commission's proposed spectrum disaggregation and partitioning procedures, including the adoption of the two options proposed for satisfying construction requirements. Id.

[17/] For stratospheric services, the "substantial service requirement" should be satisfied if the licensee provides coverage to 20% of the population in its service area at the ten-year renewal mark.

be entitled to a renewal expectancy at the end of its license term provided that all relevant licensing requirements are met.[18/]

4. Minimal ownership restrictions will maximize participation and help attract capital for the 47 GHz band.

The Commission's policies should maximize participation by operators and capital investors in the 47 GHz band. As a consequence, the Commission should not impose any 47 GHz eligibility restrictions, other than the statutory foreign ownership limitations.[19/] Notice at ¶ 71. Similarly, the Commission should not include the 47 GHz band among the services subject to the CMRS spectrum cap because the policy goals achieved with that cap are not applicable to the 47 GHz spectrum. Id. at ¶¶ 72-73. While some spectrum aggregation restriction is appropriate for the 47 GHz band, Sky Station currently has no opinion on the appropriate limit, except that no single entity should be able to license the entire 47 GHz band. Notice at ¶¶ 74-75.

5. 47 GHz licensees should have the option of flexible regulatory status and standard operating requirements.

Given the wide range of potential services in the 47 GHz band, the Commission should provide licensees with the flexibility to offer service as a common carrier, a non-common carrier, or both. Notice at ¶ 67-68. Additionally, licensees should not be required to describe the nature of their service, provided that the Commission is

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[18/] Sky Station also supports the proposed competitive bidding rules and the public notice procedure. Notice at ¶¶ 104-105, 145-151.

[19/] The foreign ownership requirements should be implemented in accordance the procedures set forth in the Notice. Id. at ¶¶ 77-80.

notified of their regulatory status in a streamlined application. Id. at ¶ 69. Licensees also should notify the Commission at least 30 days in advance of any changes to their regulatory status.[20] Id. at ¶ 70. This flexible approach would give the Commission all the information it requires to perform its job while not straight-jacketing licensees.

As the Commission has noted, any 47 GHz licensee that elects common carrier status is subject to the requirements of Title II of the Communications Act. Notice at ¶ 106. However, the Commission has elected to forbear from applying certain Title II requirements to CMRS providers -- and Sky Station's proposed 47 GHz services are at least as deserving of the same treatment. The Commission requests comment on whether and to what extent this forbearance policy should be extended to fixed 47 GHz common carrier services. Notice at ¶ 107. Sky Station agrees with the Commission that this analysis may not be completed within the time frame for adopting 47 GHz service rules and that such analysis should not delay progress in creating this exciting new service. As a consequence, the Commission should adopt its proposed interim forbearance policy for fixed 47 GHz common carrier services and address a permanent forbearance policy at a later date.[21] Id. at ¶¶ 108-111.

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[20] Prior authorization of regulatory status changes should not be required. Different notification periods may apply when the change in status results in a discontinuance, reduction or impairment of service. Id.

[21] Finally, Sky Station believes that all 47 GHz licensees should be subject to EEO requirements, but that the implementation of these requirements should not delay a decision in this proceeding. As a result, Sky Station recommends that the Commission select an approach that will require only minimal changes to the Commission's rules and be able to withstand judicial review. Notice at ¶ 112-113.

B. The Commission Should Adopt Interference Coordination And Other General Technical Requirements.

The successful implementation of the 47 GHz service requires that the Commission protect licensees from harmful interference while affording them enough flexibility to develop new services. As set forth below, this balance can best be struck by requiring co-channel interference coordination among stations located within 200 km of a service area boundary and by not imposing any power flux density limitations. Additionally, the Commission should adopt (i) its proposed out-of-band and spurious emission limits, (ii) standard RF safety regulations, and (iii) its proposed quiet zone requirements.[22] Provided that the Commission adopts the technical requirements discussed herein, there is no need for it to impose any unique regulations applicable to only stratospheric systems.[23]

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[22] Sky Station also would require 47 GHz licensees to comply with the Part 27 regulations relating to equipment authorization, antenna structures and air navigation safety, international coordination, environmental protection, and disturbance of AM broadcast station antenna patterns. The frequency stability requirements in Part 27 also should apply to the 47 GHz band so long as the transmitters are subject to the out-of-band and spurious emission limits. Notice at ¶ 117.

[23] As the Commission has noted, there is a difference between the international and domestic allocations to be used for stratospheric services. Notice at ¶ 58. Sky Station can design its system to accommodate both channelization schemes without any additional Commission regulations. Such frequency agility is advantageous in a dynamic global environment.

1. The Commission should require the coordination of any co-channel station located within 200 km of a service area boundary and not impose any power flux density limitations.

The protection of 47 GHz licensees from harmful co-channel interference is paramount to establishing a viable 47 GHz service. In the Notice, the Commission proposed two different co-channel protection alternatives, namely (i) coordination requirements for stations located near the service area boundaries, and (ii) power flux density limitations at the service area boundaries. Notice at ¶¶ 114, 119-124. As explained more fully below, the Commission should establish a co-channel coordination requirement for stations located within 200 km of a service area boundary. However, power flux density limitations are not feasible, given the fixed geometric configuration of stratospheric networks.

a. Coordination requirements for stations within 200 km of the service area boundary will adequately protect 47 GHz licensees.

Harmful co-channel interference can be effectively avoided by requiring 47 GHz licensees to coordinate transmitters located within 200 km of any service area boundary. Notice at ¶ 124. At this time there is insufficient operating information on system parameters in the 47 GHz band for fixed service systems. Analyses based on ITU-R Recommendations (e.g., Rec. F.758-1) show that the dominant interference scenario occurs when the main-beam of the fixed service system is pointing directly at the HAPS, and that the interference will cause more than 0.5 dB degradation in C/N if the two systems are located less than 400 km apart

The coordination requirement can be implemented easily by applying the procedures set forth in Section 101.103 of the Commission's rules, subject to certain modifications. Notice at ¶¶ 125-126. Specifically, there are several provisions of Section 101.103 that apply only to mobile satellite services and therefore should not be adopted for the 47 GHz band.[24/]

b. Power flux density limits are not compatible with stratospheric systems.

In contrast to coordination requirements, power flux density limits are not a practical method for limiting co-channel interference between permissible 47 GHz licensees. Notice at ¶ 128. Stratospheric services are provided using a network of airships, which are carefully positioned in accordance with a geometric configuration. If a signal transmitted from an airship exceeds a power flux density limit at boundary, there is little the licensee can do to diminish the signal power without curtailing service to a significant number of subscribers.[25/] Since cutting back service in an overly broad manner is not commercially viable and unnecessarily harms the public, we recommend coordination requirements, which can provide effective co-channel interference protection. Thus, the Commission should not establish any 47 GHz power flux density limitations.

[24/] The Commission should identify in the service rules what provisions of Section 101.103 should not apply to 47 GHz licensees.

[25/] Specifically, the licensee would need to shut off each transmitter on the airship that exceeds the power flux density limitation. It would not be able to relocate the airship or simply reduce the power of the problematic transmitters.

2. The proposed out-of-band and spurious emission standards will guard against adjacent channel interference.

In order to reduce the potential for out-of-band and spurious emissions, the Commission should require 47 GHz licensees to attenuate transmitter power ("P") by at least 43+10 log10(P) or 80 decibels, whichever is less, for emissions on any frequencies not included in the licensee's authorization. Notice at ¶ 131. Assuming the Commission adopts this proposed limitation, no other adjacent channel interference protection criteria are needed for 47 GHz services. Id. at ¶ 130.

3. The proposed RF safety requirements are compatible with stratospheric services.

The RF safety requirements set forth in Section 27.52 of the Commission's rules should be applied to all 47 GHz services and equipment. Notice at ¶¶ 132-133. As a consequence, all fixed transmitters will require routine environmental evaluation if their effective radiated power exceeds 1,000 watts. Id. In the case of Sky Station's system, the fixed end-user terminals will comply with this 1,000 watt limit, but the gateway transmitters will require environmental evaluation. The transmitters on the airships devoted to the gateway stations will have effective radiated powers exceeding 1,000 watts, but since they are located in the stratosphere, a well understood and relatively uniform environment far removed from the ground, type approval of stratospheric-based transmitters should be adequate for RF safety.

4. Stratospheric systems should be able to comply with the Part 27 quiet zone regulations.

Stratospheric licensees should be able to comply with the quiet zone regulations set forth in Section 27.61 of the Commission's rules. Notice at ¶¶ 117, 141. In virtually all situations, the rule protects quiet zones by establishing either a notification or coordination process when certain power limitations cannot be met. 47 C.F.R. § 27.61. Id. Stratospheric licensees should be able to coordinate to protect quiet zones from harmful co- and adjacent-channel interference.[26/]

C. The Commission Should Sensibly Address Other Issues.

1. The FCC must rely on the FAA, as the expert agency, to assure compliance of stratospheric services with appropriate air safety regulations.

The FCC must rely on the FAA, as the expert agency, to assure compliance of stratospheric services with appropriate air safety regulations. As the attached declaration from Carl Vogt demonstrates, the FAA has exclusive jurisdiction over Sky Station's airships, and the FAA is obligated to certify and regulate the safety of these airships. See Exhibit I. Fundamental redundant safety and control features will be integrated into the entire system to ensure fail safe operation with graceful degradation. The FAA's air safety expertise, combined with the redundancy of its safety procedures, will provide ample assurance that the stratospheric airships are safe.

[26/] The sole exception is the Table Mountain Receiving Location in Boulder, Colorado ("Table Mountain"), where an absolute power flux density limitation is imposed for some bands. Stratospheric services, operating at 47 GHz, would not affect this location.

Because the FCC has no jurisdiction over air safety, and the FAA will regulate airships in the stratosphere, the Commission should not adopt any rules on public safety or liability regarding airships.

2. The governmental spectrum sharing requirements should not add any risks to implementing 47 GHz systems.

It is important that any sharing arrangements with government users not impede the development of stratospheric and other 47 GHz systems.[27] Notice at ¶¶ 61-66. Over the past four years, the Commission has been encouraging the development of commercial broadband services in the under-utilized 47 GHz band. These efforts will be undermined if, at the licensing stage, 47 GHz licensees are required to share their spectrum with government users. Specifically, 47 GHz licensees must be able to assess the scope of their spectrum in order to plan their business. If the availability of this spectrum is subject to uncertainty, it could prevent the implementation of a rationale business plan. This, in turn, will deter much needed investment in the development of 47 GHz systems. Moreover, there is no evidence of government plans to use this spectrum for any purpose whatsoever. For these reasons, the Commission should not adopt a spectrum sharing policy that impacts the rights of licensees to use 47 GHz spectrum, particularly after it is licensed pursuant to the competitive bidding process.

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[27] Sky Station is interested in innovative sharing arrangements with the government, including the possibility of hosting government payloads on board Sky Station's stratospheric airships.

CONCLUSION

In this ever expanding information age, the demand for broadband services will continue to grow. They should be affordable for average American consumers. Here, the Commission has the opportunity to help fulfill this growing demand by opening the door for stratospheric services and other 47 GHz applications that can provide low-cost broadband alternatives to incumbent providers. For these reasons, the Commission should avoid any further regulatory delays and promptly adopt the 47 GHz services rules, as described herein, and commence a 47 GHz auction in the first quarter of 1999.

Respectfully Submitted,

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Attachment

EXHIBIT 1